

CLAIMS

1. A measuring apparatus comprising:

quasi-electrostatic field generating means generating a quasi-electrostatic field of higher field strength as compared with a radiated electric field and an induced electromagnetic field;

quasi-electrostatic field detecting means detecting a result of interaction between said quasi-electrostatic field generated by said quasi-electrostatic field generating means and applied to an object to be measured, and an electric field corresponding to a potential change caused by a dynamic reaction inside said object to be measured; and

extracting means extracting said potential change from said result of interaction detected by said quasi-electrostatic field detecting means.

2. The measuring apparatus according to claim 1, wherein:

said object to be measured is a living body; and

said quasi-electrostatic field detecting means detects said result of interaction with said electric field corresponding to said potential change caused by a biological reaction inside said living body.

3. The measuring apparatus according to claim 1, wherein

said quasi-electrostatic field generating means generates said quasi-electrostatic fields of said higher field strength as compared with said induced electromagnetic field, at each of said distances respectively corresponding to said plurality of frequencies.

4. The measuring apparatus according to claim 1, wherein
said quasi-electrostatic field generating means generates said quasi-electrostatic fields of said higher field strength as compared with said induced electromagnetic field, in time division manner for each of said distances at each of said distances respectively corresponding to said plurality of frequencies.
5. The measuring apparatus according to claim 3, wherein
said quasi-electrostatic field generating means comprises output adjusting means adjusting outputs of each voltage corresponding to each of said frequencies to a predetermined electrode, to make the strength of each of said quasi-electrostatic fields generated at each of said distances respectively corresponding to each of the frequencies become a predetermined field strength, and outputting a combined result of each of said voltages after the adjustment.
6. The measuring apparatus according to claim 4, wherein
said quasi-electrostatic field generating means comprises output adjusting means adjusting outputs of each voltage corresponding to each of said frequencies to a predetermined electrode, to make the strength of each of said quasi-electrostatic fields generated at each of said distances respectively corresponding to each of the frequencies become a predetermined field strength.
7. The measuring apparatus according to claim 1, wherein:

said quasi-electrostatic field generating means comprises a pair of electrodes for generation generating said quasi-electrostatic fields;

said quasi-electrostatic field detecting means comprises a pair of electrodes for detection detecting said result of interaction; and

said pair of electrodes for generation and said pair of electrodes for detection are formed into a unit electrode and a plurality of said unit electrodes are formed on the same surface.

8. A measuring method comprising:

a quasi-electrostatic field generating step generating a quasi-electrostatic field of higher field strength as compared with a radiated electric field and an induced electromagnetic field;

a quasi-electrostatic field detecting step detecting a result of interaction between said quasi-electrostatic field generated in said quasi-electrostatic field generating step and applied to an object to be measured, and an electric field corresponding to a potential change caused by a dynamic reaction inside said object to be measured; and

an extracting step extracting said potential change from said result of interaction detected in said quasi-electrostatic field detecting step.

9. The measuring method according to claim 8, wherein

said object to be measured is a living body, and wherein said result of interaction with said electric field corresponding to said potential change caused by a biological reaction inside said living body is detected in said quasi-electrostatic field detecting step.

10. The measuring method according to claim 8, wherein

said quasi-electrostatic fields of said higher field strength as compared with said induced electromagnetic field at each of said distances respectively corresponding to a plurality of said frequencies are generated in said quasi-electrostatic field generating step.

11. The measuring method according to claim 8, wherein

said quasi-electrostatic fields of said higher field strength as compared with said induced electromagnetic field are generated in time division manner for each of said distances at each of said distances respectively corresponding to a plurality of said frequencies in said quasi-electrostatic field generating step.

12. The measuring method according to claim 10, wherein

said quasi-electrostatic field generating step comprises output adjusting step adjusting outputs of each voltage corresponding to each of said frequencies to a predetermined electrode, to make the strength of each of said quasi-electrostatic fields generated at said distances respectively corresponding to each of the frequencies become a predetermined field strength, and outputting a combined result of each of said voltages after the adjustment.

13. The measuring method according to claim 11, wherein

said quasi-electrostatic field generating step comprises output adjusting step adjusting outputs of each voltage corresponding to each of said frequencies to a predetermined electrode, to make the strength of each of said quasi-electrostatic fields generated at said distances

respectively corresponding to each of the frequencies become a predetermined field strength.

14. A measuring apparatus comprising:

quasi-electrostatic field detecting means detecting potential changes caused by biological reactions inside a living body; and

extracting means extracting one of said potential changes caused by predetermined one of said biological reactions from said potential changes detected by said quasi-electrostatic field detecting means.

15. A measuring method comprising:

quasi-electrostatic field detecting step detecting potential changes caused by biological reactions inside a living body; and

extracting step extracting one of said potential change caused by predetermined one of said biological reactions from said potential changes detected in said quasi-electrostatic field detecting step.